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# RECLAIMING MOTES FROM COTTON GIN WASTE: PRACTICES, SUPPLIES, AND PRICES

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## PREFACE

This study was conducted at the request of the National Cotton Council of America. It is part of a project to assess the full economic impact of proposed U.S. cotton dust standards on users of raw cotton and cotton processing waste and the evaluation of alternative dust control technologies.

The authors gratefully acknowledge the efforts of personnel in the Cotton Division, Agricultural Marketing Service, who aided in planning the survey and in collecting the data. The assistance of Jesse Moore, Director of the Cotton Division, Loyd Frazier, and Alex Hodgkins (deceased) are especially acknowledged. We also thank those cotton ginnerers who participated in the survey for their cooperation.

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## SUMMARY

Approximately 32 percent of all active cotton gins in the United States collected motes from cotton gin waste during the 1976/77 season. The percentage of gins collecting varied from 7 percent of the active gins in Missouri to 95 percent in California.

The total supply of motes during the 1976/77 season was estimated at 93.3 million pounds, with State totals ranging from 429,000 pounds in Missouri to 31.7 million pounds in California.

Ginners received an average of 12.84 cents per pound for cleaned motes and 7.37 cents per pound for uncleaned motes during the 1976/77 season. Regional prices for cleaned motes ranged from 7.05 cents per pound in the Southwest to 15.43 cents per pound in the South Central Region. Price variations were not so great for uncleaned motes, ranging from 6.17 cents to 8.89 cents in the Southwest and Southeast, respectively.

The 1976/77 average price difference between cleaned and uncleaned motes was 5.47 cents per pound and varied from 0.88 cent per pound in the Southwest to 8.09 cents per pound in the West. If motes must be cleaned prior to marketing, and the price is about the same as during the 1976/77 season, the degree of cleaning should not exceed 40 percent of the original weight. Cleaning beyond that level is not economical.

These findings are based on a survey of 1,165 cotton ginners in the Cotton Belt, representing about 45 percent of all gins.



# RECLAIMING MOTES FROM COTTON GIN WASTE: PRACTICES, SUPPLIES, AND PRICES

Joseph L. Ghetti and Edward H. Glade, Jr. 1/

## INTRODUCTION

Gin motes have been reclaimed from cotton-ginning waste in most parts of the Cotton Belt for many years. 2/ Recently, however, the importance of gin motes as a raw material for the textile waste industry has increased substantially, with a corresponding increase in the volume of motes collected.

With more ginners collecting motes for sale, there is a need to know more about the total supply, magnitude of the market, price received, and concentration of supplies. This study, therefore, provides estimates of:

1. The number of gins collecting motes, and the method of collection or the means of disposal.
2. Gin mote supplies by district, State, region, and for the Nation.
3. Current prices for gin motes by type of buyer and form in which the motes were purchased (cleaned or uncleaned).

Traditionally, motes have been used, along with linters and mill waste, in manufacturing cotton batting, padding and upholstery filling, and some nonwoven fabrics. Because of restrictions on burning gin waste in many areas, gins are presently incurring waste disposal problems and are turning to reclaiming motes as a partial solution. New types of collection systems, requiring little or no investment or added labor, along with somewhat better prices for motes, have encouraged this trend.

The demand for gin motes has increased recently with the development of new open-end spinning equipment that can use motes in combination with cotton lint. Therefore, yarn producers are increasingly seeking out motes and the price has responded accordingly.

The supply of this important raw material could be restricted, however, if stringent standards, proposed by the Occupational Safety and Health Administration, on cotton dust levels are applied to all processors of cotton lint and waste. Moreover, a source of revenue for many ginners could become a liability because of disposal problems and costs.

Data were collected from active gins in the Cotton Belt by personal interviews and mail. Personal interviews with selected gin managers were held in

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1/ The authors are an agricultural economist and an economist with the Fibers and Oils Program Area, Commodity Economics Division, ESCS, stationed at Stoneville, Mississippi, and Washington, D.C., respectively.

2/ The terms "gin motes" and "motes" refer to any cotton waste from the cotton-ginning process. Most motes, however, result from the lint-cleaning process.

order to become familiar with the operating methods and collection practices used. Field representatives of USDA's Cotton Division, Agricultural Marketing Service, obtained additional data by personal interviews with 12 percent of all gins. A questionnaire was then mailed to all other active cotton gins. A total of 1,165 questionnaires were returned; those gins represent nearly 45 percent of all active gins in the United States, and had processed 4.5 million bales of cotton, or nearly 44 percent of the 1976/77 crop. U.S. Census Bureau reports of 1976/77 cotton ginnings were used to expand sample data to obtain estimates of U.S. totals.

## COLLECTION OR DISPOSAL PRACTICES

The decision to reclaim gin motes for sale involves many considerations. The most critical, however, is the presence of a stable market outlet that pays prices above the costs of collection or disposal. An adequate ginning volume is also required in order to collect sufficient quantities of motes.

### Gins Collecting Motes

Approximately 32 percent of all active gins in the United States collected motes during the 1976/77 season (table 1). The percentage of gins collecting motes varied widely across the Cotton Belt, ranging from 7 percent of the gins in Missouri to 95 percent of the California gins. The highest proportion of gins collecting motes (74 percent) was in the West, where the quality of motes is good, prices are high, and strict disposal regulations exist. In the Southeast and Southwest, 30 percent of all gins collected motes, and in the South Central region, only 21 percent collected motes. The latter three regions are characterized by a predominance of small gins with low average volumes. Comparable data for farm management districts within each State are shown in appendix table 1.

Most gin motes were sold in baled form and only 16 percent were sold loose. But slightly over one-half of all baled motes sold were first cleaned at the gin either to obtain higher prices or to create a marketable product. Seventy-five percent of sales went to cleaning plants, linters dealers, and waste dealers. <sup>3/</sup> Sales to other types of buyers accounted for the remaining 25 percent.

### Gins Discarding Motes

Sixty-eight percent of all ginners discarded their motes (table 2). Although burning had been the usual way of disposing of gin waste, only the South Central region reported any appreciable amount of motes being burned. Approximately 16 percent of the ginners disposed of motes by giving them away, returning them to the land as a soil conditioner, and feeding them to livestock. The primary reasons for not collecting motes were lack of market, inconvenience,

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<sup>3/</sup> Mote-cleaning plants are firms that buy loose or baled motes and clean them for resale.



Table 1--Proportion of gins collecting notes, collection method, and type of sales outlet, 1976/77

State and region 1/	Gins : collect- ing :	Collecting method 2/ : Baled : Loose :	Baled : notes : cleaned :	Outlet			
				Cleaning : plant :	Linters : dealer :	Waste : dealer :	Other 3/
			Percent				
Alabama	44	100	30	14	22	36	28
Florida	---	---	---	---	---	---	---
Georgia	21	100	83	---	13	87	---
North Carolina	23	100	25	22	45	33	---
South Carolina	23	100	30	---	43	25	32
Southeast	30	100	33	12	29	38	21
Arkansas	13	100	18	49	46	---	5
Louisiana	15	99	56	65	3	---	32
Mississippi	25	91	25	40	43	9	8
Missouri	7	100	---	69	---	31	---
Tennessee	42	90	65	49	12	26	13
South Central	21	94	30	47	35	8	10
Oklahoma	40	49	40	28	33	10	29
Texas	29	65	47	32	18	36	14
Southwest	30	64	47	32	20	32	16
Arizona	59	99	51	59	30	11	---
California	95	89	84	24	8	10	58
New Mexico	52	48	23	56	---	---	44
West	74	88	68	34	14	8	41
United States	32	84	52	36	22	17	25

1/ For more detailed data by State districts, see appendix table 1.

2/ Proportions based on pounds of notes collected by each method.

3/ Includes mill waste dealers, batting manufacturers, and bedding and furniture manufacturers.

--- = 0.

low prices, and lack of collecting and baling equipment. Comparable data on disposal practices in farm management districts in each State are shown in appendix table 2.

### SUPPLIES OF GIN MOTES

The total U.S. supply of motes during the 1976/77 season was estimated at 93.3 million pounds. Gin motes were collected from 54 percent of all bales ginned, with an average of about 16 pounds of motes collected from each bale. The volume of motes collected from a bale of cotton depends upon the number of lint cleaners used in the gin and whether motes are collected from all cleaners, the type and amount of overhead cleaning machinery used, and the degree of cleaning that motes receive at the gin.

In estimating total U.S. supplies, the proportion of the bales from which motes were collected was determined from sample data from each district. <sup>4/</sup> These percentages were then applied to total ginnings in each district as reported by the U.S. Bureau of the Census to obtain the estimated total number of bales in each district from which motes could be collected. Total supplies were then obtained by multiplying the average pounds of motes collected per bale (from sample gins) times the total number of bales for the district. District totals were then combined into State, regional, and national estimates. District totals were developed as they are most useful to dealers and processors for locating specific mote supplies. The estimated supplies of gin motes by district are shown in appendix table 3.

#### Southeast Region

Motes collected in the Southeast accounted for about 9 percent (about 8 million pounds) of the U.S. supply during 1976/77 (table 3). Motes were collected from nearly 39 percent of all bales processed by sample gins. Alabama was the largest supplier of motes in the region because of its relatively larger cotton production and a higher proportion of gins collecting motes; approximately 60 percent of the total regional supply came from Alabama. The Southeast had the highest average volume of motes collected per bale--between 9 and 15 pounds higher than the figures for other regions. The difference is explained by the low level of cleaning that motes received in the Southeast.

#### South Central Region

Over 16 percent of the total U.S. mote supply came from the South Central region, about 15 million pounds. Mississippi and Arkansas accounted for 47 and 22 percent, respectively, of total regional supplies. Motes were collected from 27 percent of all bales ginned, and an average bale yielded 20 pounds of motes. Compared with other regions, the South Central had the lowest proportion of gins

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<sup>4/</sup> The terms "sample data," "sample gins," and "sample bales" refer to the 1,165 gins from which data were obtained. Appendix table 5 lists States and major districts contained therein.

Table 2--Proportion of gins discarding notes, method of disposal, and reason for discarding, 1976/77

State and region 1/	: Gins :			Method of disposal :			Reason for discarding				
	: discard- : ing :	: Burned : ing :	: Left on : premises:	: Buried : premises:	: Other : premises:	: Lack of : market :	: Customer : relations:	: Incon- : venience:	: No lint : cleaner:	Other 2/	
						Percent					
Alabama	: 56	: 5	: 22	: 24	: 49	19	: ---	: 68	: ---	: 13	
Florida	: 100	: ---	: ---	: 100	: ---	100	: ---	: ---	: ---	: ---	
Georgia	: 79	: 7	: 6	: 10	: 77	25	: ---	: 65	: ---	: 7	
North Carolina	: 77	: ---	: 14	: 48	: 38	35	: ---	: 48	: 4	: 13	
South Carolina	: 77	: 9	: 14	: 46	: 31	41	: ---	: 38	: ---	: 21	
Southeast	: 70	: 6	: 15	: 31	: 48	30	: ---	: 56	: ---	: 14	
Arkansas	: 87	: 42	: 5	: 10	: 43	22	: ---	: 50	: ---	: 23	
Louisiana	: 85	: 29	: 24	: 7	: 40	24	: ---	: 52	: ---	: 24	
Mississippi	: 75	: 37	: 9	: 9	: 45	14	: ---	: 61	: 2	: 20	
Missouri	: 93	: 16	: 9	: 23	: 52	26	: ---	: 44	: ---	: 28	
Tennessee	: 58	: 32	: 3	: 16	: 49	16	: ---	: 49	: 3	: 27	
South Central	: 79	: 35	: 9	: 11	: 45	20	: ---	: 53	: 1	: 23	
Oklahoma	: 60	: 3	: ---	: 6	: 91	59	: ---	: 19	: 9	: 13	
Texas	: 71	: 6	: 4	: 4	: 86	52	: ---	: 32	: 2	: 12	
Southwest	: 70	: 5	: 3	: 4	: 88	52	: ---	: 31	: 3	: 12	
Arizona	: 41	: 11	: 5	: 5	: 79	36	: ---	: 11	: 21	: 32	
California	: 5	: ---	: 33	: ---	: 67	---	: ---	: 67	: ---	: 33	
New Mexico	: 48	: ---	: ---	: ---	: 100	67	: ---	: 6	: ---	: 27	
West	: 26	: 5	: 5	: 4	: 86	46	: ---	: 21	: 10	: 19	
United States:	: 68	: 19	: 8	: 12	: 61	33	: ---	: 45	: 2	: 18	

1/ For more detailed data by State districts, see appendix table 2.

2/ Includes, in order of rank, ginning volume too low, lack of equipment, and lack of labor.  
--- = 0.

Table 3--Supply of cotton gin notes, 1976/77

State and region 1/	Estimated mote supply 2/	Sample data					Total volume of notes
		Bales	Bales from which notes	Motes			
		ginned	were collected	per bale			
	1,000 pounds	1,000 bales	Percent	1,000 bales	Pounds	1,000 pounds	
Alabama	4,932	167.5	50.8	85.0	29.0	2,465	
Georgia	953	68.2	24.1	16.5	20.1	345	
North Carolina	1,105	39.1	41.6	16.2	37.3	605	
South Carolina	1,108	86.7	25.1	21.8	30.4	663	
Southeast 3/	8,098	361.5	38.6	139.4	29.2	4,078	
Arkansas	3,291	383.4	19.9	76.3	21.3	1,622	
Louisiana	1,913	229.1	33.9	77.6	10.4	809	
Mississippi	7,219	469.9	27.4	128.7	23.4	3,016	
Missouri	429	74.5	6.4	4.7	41.6	198	
Tennessee	2,374	115.2	51.8	59.7	20.8	1,239	
South Central	15,226	1,272.0	27.3	347.0	19.8	6,885	
Oklahoma	1,906	118.4	60.5	71.7	18.2	1,302	
Texas	24,786	1,443.0	46.4	668.9	16.1	10,779	
Southwest	26,692	1,561.4	47.4	740.6	16.3	12,081	
Arizona	10,494	396.6	81.6	324.0	15.0	4,858	
California	31,691	863.4	98.4	849.2	13.2	11,236	
New Mexico	1,122	59.3	63.0	37.3	24.9	930	
West	43,307	1,319.3	91.8	1,210.5	14.1	17,024	
United States	93,323	4,514.3	54.0	2,436.7	16.4	40,070	

1/ For more detailed data by State districts, see appendix table 3.

2/ Based on sample gin data from proportion of bales from which notes were collected, and average pounds collected per bale. Data from sample gins were expanded by applying total ginnings reported by the U.S. Bureau of the Census.

3/ No data for Florida as all gins reported disposing of notes.



collecting motes. Because of that and the fact that the region produces over one-fourth of the U.S. cotton crop, a much larger volume of motes than presently collected could be supplied from this region.

### Southwest Region

About 27 million pounds of motes were collected in the Southwest during 1976/77, about 30 percent of the total U.S. figure. Motes from the western district of Texas accounted for about 22.5 million pounds, or 84 percent of the regional total. Southwest gins collected motes from nearly one-half of all bales processed during the season. Because about 52 percent of all motes were cleaned before selling, the average bale yielded only about 16 pounds of motes.

### Western Region

While about one-third of total cotton production comes from the West, over 46 percent of all gin motes (about 43 million pounds) originated there during 1976/77. Over 73 percent of the region's total came from California. Sampled gins in the West collected motes from nearly 92 percent of all bales ginned. Because nearly 68 percent of all motes collected were cleaned, only 14.1 pounds of motes were collected per bale, the lowest such figure of all regions.

## PRICES FOR GIN MOTES

The price of motes varied by location, type of sales outlet, and the form in which the motes were sold. In some cases, motes are collected for sale only to facilitate disposal problems with revenue received only sufficient to cover alternative disposal costs. In other situations, however, the sale of motes may represent an important added source of income for the cotton ginner.

### Prices Received

Cleaned motes brought ginner an average of 12.84 cents per pound in 1976/77 (table 4); uncleaned motes averaged 7.37 cents per pound. Regional prices for cleaned motes varied from 7.05 cents per pound in the Southwest to 15.43 cents in the South Central region. The higher prices received for motes in the South Central and Western regions probably reflect the better fiber length and strength of cotton grown in these areas.

Prices by State for uncleaned motes fluctuated much more widely than did those for cleaned motes. Average prices for uncleaned motes ranged from 2.36 cents per pound in Oklahoma to 14.33 cents in Louisiana. The lower prices found in the Southwest for both cleaned and uncleaned motes is largely due to the use of cotton strippers, which leaves larger quantities of trash among the motes than do other cotton-harvesting methods.

Table 4 also shows the variations in prices received by the type of outlet to which the motes were sold. In general, the quality of motes usually purchased by a particular dealer or outlet is the primary reason for the price variations among outlets. For example, linters dealers frequently buy motes to fill special orders and normally buy better quality motes and pay slightly higher prices to obtain the lots desired. On the other hand, cleaning plants generally pay lower prices because the additional expense of further cleaning must be





covered. Market outlets classified as "other" (primarily padding, upholstery, and yarn manufacturers) paid the highest prices for motes during 1976/77, reflecting their purchases of high-quality motes for use in products of higher end-use value. Information on mote prices received and market outlets for each State district is given in appendix table 4.

### Price Differences

The difference in the average price of cleaned versus uncleaned motes was 5.47 cents per pound (12.84 vs. 7.37), and varied from 0.88 cent per pound in the Southwest to 8.09 cents per pound in the West (table 4).

The average cost per pound for cleaning a 480-pound bale of motes in 1976/77 was estimated at approximately 2.25 cents.<sup>5/</sup> Therefore, cleaning motes prior to marketing probably would not be justified in the Southeast and Southwest if uncleaned motes could be marketed. In contrast, price spreads favor cleaning Western and South Central motes prior to marketing.

However, while the present price differentials do not seem great enough to be profitable in all areas, some ginners must clean their motes to have a marketable product. Table 5 shows differences in income received per bale from alternative weight losses due to cleaning motes. Although the price differences for cleaned and uncleaned motes are significant for the United States as a whole, they were not great enough to offset all weight losses due to cleaning. For example, using the U.S. average price of 12.84 and 7.37 cents per pound for cleaned and uncleaned motes, lower returns occurred with weight losses exceeding 40 percent due to cleaning (table 5). After cleaning, bale values increase substantially, but only up to 40 percent weight loss. Reductions beyond this point result in significant decreases in bale value.

### OUTLOOK

The outlook for supplies, prices, and utilization of cotton gin motes depends on a number of important factors. Potential supplies will necessarily be tied to the level of cotton production, but actual pounds reclaimed will be related to the demand for motes by processors at acceptable prices.

Current and future air pollution regulations will increase the extent and cost in gin waste disposal. Growing restrictions on burning gin waste will cause an increasing number of gins to incur hauling and disposal problems. Thus, there will be an added incentive to sell as much gin waste as possible, even if the sales revenues cover only the costs of collection and hauling. Ginners who currently do not collect motes may, therefore, find it profitable to do so in the near future. Collecting gin motes could be restricted, however, if the proposed strict standards on cotton dust levels are applied to processors and users of cotton waste.

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<sup>5/</sup> Updated from Shelby H. Holder, Jr. and Zolon M. Looney, Reclaiming and Marketing Cotton Gin Motes, U.S. Dept. Agr., Econ. Res. Serv., ERS-168, May 1964.

Table 5--Estimated price of baled cotton gin notes before and after cleaning,  
using 1976/77 average price and specified weight losses due to cleaning

Weight loss	Net		Price					
	bale weight 1/		Before cleaning			After cleaning		
	Before cleaning	After cleaning	Per pound 2/	Per bale	Per pound 3/	Per bale	Per pound 3/	Difference
Percent	--- Pounds ---		Cents	Dollars	Cents	-- Dollars --		
10	480	432	7.37	35.38	12.84	55.47	+ 20.09	
20	480	384	7.37	35.38	12.84	49.31	+ 13.93	
30	480	336	7.37	35.38	12.84	43.14	+ 7.76	
40	480	288	7.37	35.38	12.84	36.98	+ 1.60	
50	480	240	7.37	35.38	12.84	30.82	- 4.56	
60	480	192	7.37	35.38	12.84	24.65	- 10.73	

1/ After deducting bagging and ties.

2/ Average price based on 109 lots totaling 12,624,154 pounds.

3/ Average price based on 138 lots totaling 15,947,704 pounds.

Appendix table 1--Proportion of gins that collected motes, collecting method, and type of sales outlet, 1976/77

District, State, and region 1/	Gins collecting	Collecting method		Baled motes cleaned	Cleaning plant	Outlet		
		Baled	Loose			Linters dealer	Waste dealer	Other
		Percent						
Southeast	30	100	---	33	12	29	38	21
Alabama	44	100	---	30	14	22	36	28
Coastal plain	43	100	---	11	---	38	32	30
Hill section	44	100	---	38	24	12	38	26
Florida	---	---	---	---	---	---	---	---
Georgia	21	100	---	83	---	13	87	---
Coastal plain	21	100	---	87	---	13	87	---
Hill section	33	100	---	---	---	---	---	---
North Carolina	23	100	---	25	22	45	33	---
Coastal plain	24	100	---	25	22	47	31	---
Hill section	20	100	---	---	---	---	100	---
South Carolina	23	100	---	30	---	43	25	32
Coastal plain	29	100	---	32	---	43	25	32
Hill section	8	100	---	---	---	---	---	---
South Central	21	94	6	30	47	35	8	10
Arkansas	13	100	---	18	49	46	---	5
Hill section	14	100	---	21	77	23	---	---
Delta	11	100	---	14	1	85	---	14
Louisiana	15	99	1	56	65	3	---	32
Mississippi	25	91	9	25	40	43	9	8
Coastal plain	4	100	---	17	7	34	59	---
Hill section	33	97	3	3	88	6	6	---
Delta	25	85	15	41	15	70	1	14
Missouri	7	100	---	---	69	---	31	---
Hill section	25	100	---	---	100	---	---	---
Delta	5	100	---	---	66	---	34	---
Tennessee	42	90	10	65	49	12	26	13
Hill section	42	90	10	57	62	15	7	16
Delta	42	88	12	78	29	8	55	8
Southwest	30	64	36	47	32	20	32	16
Oklahoma	40	49	51	40	28	33	10	29
Texas	29	65	53	47	32	18	36	14
Western	39	60	40	48	36	15	35	13
Coastal plain	3	100	---	100	---	---	---	100
Hill section	17	100	---	100	---	---	---	100
Irrigated	30	98	2	85	9	42	49	---
West	74	88	12	68	34	14	8	41
Arizona	59	99	1	51	59	30	11	---
California	95	89	11	84	24	8	10	58
New Mexico	52	48	42	23	56	---	---	44
United States	32	84	16	52	36	22	17	25

1/ Farm management districts. See appendix table 5 for list of major cotton-producing counties in each district.

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Appendix table 2--Proportion of gins that discarded notes, method of disposal, and reason for discarding, 1976/77

District, State, and region 1/	Gins discarded	Method of disposal				Reason for discarding				
		Burned	Left on premises	Buried	Other	Lack of market	Customer relations	Incon- venience	No lint cleaner	Other
					Percent					
Southeast	70	6	15	31	48	30	---	56	---	14
Alabama	56	5	22	24	49	19	---	68	---	13
Coastal plain	57	---	13	75	12	12	---	63	---	25
Hill section	51	7	24	10	59	21	---	69	---	10
Florida	100	---	---	100	---	100	---	---	---	---
Georgia	79	7	6	10	77	25	3	65	---	7
Coastal plain	79	8	8	12	72	30	---	62	---	8
Hill section	66	---	---	---	100	---	---	100	---	---
Piedmont	100	---	---	---	100	---	33	67	---	---
North Carolina	77	---	14	48	38	35	---	48	4	13
Coastal plain	76	---	18	59	23	32	---	48	---	10
Piedmont	80	---	---	---	100	50	---	---	24	25
South Carolina	77	9	14	46	31	41	---	38	---	21
Coastal plain	71	12	13	50	25	35	---	43	---	22
Piedmont	92	---	18	36	46	55	---	27	---	18
South Central	79	35	9	11	45	20	3	53	1	23
Arkansas	87	42	5	10	43	22	5	50	---	23
Hill section	86	39	5	10	46	24	5	49	---	22
Delta	89	44	6	10	40	21	4	50	---	25
Louisiana	85	29	24	7	40	24	---	52	---	24
Mississippi	75	37	9	9	45	14	3	61	2	20
Coastal plain	83	25	15	---	60	---	---	85	---	15
Hill section	67	14	---	7	79	14	14	43	---	29
Delta	75	43	9	12	36	17	2	59	2	20
Missouri	93	16	9	23	52	26	2	44	---	28
Hill section	75	34	---	---	66	34	---	---	---	66
Delta	95	15	10	25	50	25	2	48	---	25
Tennessee	58	32	3	16	49	16	5	49	3	27
Hill section	58	14	4	18	64	18	4	42	---	36
Delta	58	60	---	13	27	13	7	60	7	13
Southwest	70	5	3	4	88	52	2	31	3	12
Oklahoma	60	3	---	6	91	59	---	19	9	13
Texas	71	6	4	4	86	52	2	32	2	12
Western	61	6	2	3	89	63	1	31	1	4
Coastal plain	97	1	6	7	86	41	4	35	1	19
Hill section	83	20	---	---	80	20	---	60	---	20
Irrigated	70	---	13	3	84	39	---	29	6	26
West	26	5	5	4	86	46	4	21	10	19
Arizona	41	11	5	5	79	36	---	11	21	32
California	5	---	33	---	67	---	---	67	---	33
New Mexico	48	---	---	---	100	67	---	6	---	27
United States	68	19	8	12	61	33	2	45	2	18

1/ Farm management districts. See appendix table 5 for list of major cotton-producing counties.



Appendix table 3--Supply of cotton gin notes, 1976/77

District, State, and region 1/	Mote supply		Data from sample gins			
	All gins 2/	Sample gins	Bales ginned	Bales from which notes were collected	Motes per bale	
	Pounds		Number	Percent		Pounds
Southeast 3/	8,098,125	4,078,459	361,524	139,493	38.6	29.2
Alabama	4,931,822	2,465,015	167,494	85,012	50.8	29.0
Coastal plain	1,264,532	752,650	37,128	22,499	61.0	33.4
Hill section	3,667,290	1,712,365	130,366	62,513	48.0	27.4
Georgia	953,013	345,370	68,213	16,459	24.1	21.0
Coastal plain	942,933	335,470	62,976	15,701	24.9	21.4
Hill section	10,080	9,900	1,541	758	49.2	13.1
Piedmont	---	---	3,696	---	---	---
North Carolina	1,104,960	605,375	39,074	16,241	41.6	37.3
Coastal plain	1,056,297	580,175	36,222	15,427	42.6	37.6
Piedmont	48,663	25,200	2,852	814	28.5	31.0
South Carolina	1,108,330	662,699	86,743	21,781	25.1	30.4
Coastal plain	1,082,003	626,699	78,181	20,073	25.7	31.2
Piedmont	26,327	36,000	8,562	1,708	19.9	21.1
South Central	15,225,654	6,885,285	1,272,088	346,988	27.3	19.8
Arkansas	3,291,388	1,621,690	383,395	76,262	19.9	21.3
Hill section	1,831,610	807,870	157,502	44,917	28.5	18.0
Delta	1,459,778	813,820	225,893	31,345	13.9	26.0
Louisiana	1,913,103	808,820	229,076	77,568	33.9	10.4
Mississippi	7,218,654	3,016,450	469,903	128,704	27.4	23.4
Coastal plain	1,567,348	545,960	90,348	25,682	28.4	21.3
Hill section	1,350,074	460,339	54,228	17,904	33.0	25.7
Delta	4,301,232	2,010,151	325,327	85,118	26.2	23.6
Missouri	428,732	198,850	74,467	4,774	6.4	41.6
Hill section	27,275	18,000	6,523	635	9.7	28.3
Delta	401,457	180,850	67,944	4,139	6.1	43.7
Tennessee	2,373,777	1,239,475	115,247	59,680	51.8	20.8
Hill section	1,477,519	724,710	75,772	37,107	49.0	19.5
Delta	896,258	514,765	39,475	22,573	57.2	22.8
Southwest	26,692,568	12,081,440	1,561,451	740,632	47.4	16.3
Oklahoma	1,906,191	1,362,215	118,405	71,690	60.5	18.2
Texas	24,786,377	10,779,225	1,443,046	668,942	46.4	16.1
Western	22,535,894	9,098,277	1,077,679	556,817	51.7	16.3
Coastal plain	460,812	196,000	143,432	4,719	3.3	41.5
Hill section	118,596	39,750	11,228	2,164	19.3	18.4
Irrigation	1,671,075	1,445,198	210,707	105,242	49.9	13.7
West	43,306,473	17,024,903	1,319,273	1,210,513	91.8	14.1
Arizona	10,493,744	4,858,220	396,600	324,010	81.6	15.0
California	31,690,763	11,236,293	863,395	849,185	98.4	13.2
New Mexico	1,121,966	930,390	59,278	37,318	63.0	24.9
United States	93,322,820	40,070,087	4,514,336	2,437,626	54.0	16.4

1/ Farm management district. See appendix table 5 for list of major cotton-producing counties included in each district.

2/ Based on sample gin data from proportion of bales from which notes were collected, and average pounds collected per bale. Data from sample gins were applied to total ginnings as reported by the U.S. Bureau of the Census in April 1977.

3/ No data for Florida as all gins reported disposing of notes.

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Appendix table 4--Average prices received per pound for cotton gin notes, 1976/77

District, State, and region <sup>1/</sup>	Average price received		Average price paid by type of outlet and by form in which notes were bought							
	Cleaned	Uncleaned	Cleaned	Uncleaned	Cleaned	Uncleaned	Cleaned	Uncleaned	Cleaned	Uncleaned
	Cents									
Southeast <sup>2/</sup>	11.90	8.89	14.25	10.00	9.82	10.31	13.14	7.68	---	8.95
Alabama	13.56	9.02	11.00	---	8.00	11.06	14.18	7.30	---	8.45
Coastal plain	12.00	8.79	---	---	---	12.10	12.00	6.00	---	6.46
Hill section	13.90	9.39	11.00	---	8.00	6.25	14.74	9.72	---	10.00
Georgia	11.80	6.03	---	---	17.00	4.00	11.10	7.00	---	---
Coastal plain	11.80	6.03	---	---	17.00	4.00	11.10	7.00	---	---
Hill section	---	---	---	---	---	---	---	---	---	---
North Carolina	8.99	7.36	15.00	10.00	6.80	---	---	6.87	---	---
Coastal plain	8.99	7.36	15.00	10.00	6.80	---	---	6.87	---	---
Piedmont	---	---	---	---	---	---	---	---	---	---
South Carolina	13.60	9.40	---	---	13.60	5.00	---	9.30	---	10.50
Coastal plain	13.60	9.40	---	---	13.60	5.00	---	9.30	---	10.50
Piedmont	---	---	---	---	---	---	---	---	---	---
South Central	15.43	8.38	15.31	8.85	13.51	7.24	18.81	5.30	16.40	11.85
Arkansas	15.77	10.77	---	10.16	15.77	13.58	18.00	---	---	10.00
Hill section	18.82	7.53	---	7.50	18.82	8.00	18.00	---	---	---
Delta	10.00	12.41	---	14.00	10.00	14.15	---	---	---	10.00
Louisiana	19.52	14.33	20.72	14.33	19.00	---	---	---	19.00	---
Mississippi	13.62	6.73	16.23	6.95	12.07	6.28	17.75	5.59	15.10	---
Coastal plain	14.00	6.32	---	10.00	---	9.00	---	4.50	14.00	---
Hill section	17.75	9.55	---	8.40	---	5.80	17.75	12.00	---	---
Delta	13.39	5.49	16.23	5.45	12.07	5.52	---	---	15.75	---
Missouri	---	10.39	---	10.39	---	---	---	---	---	---
Hill section	---	13.00	---	13.00	---	---	---	---	---	---
Delta	---	10.00	---	10.00	---	---	---	---	---	---
Tennessee	15.40	9.01	12.16	7.78	10.74	---	19.00	1.00	18.74	16.50
Hill section	12.65	10.66	11.98	9.62	7.22	---	---	1.00	20.00	16.50
Delta	18.00	4.72	13.50	4.72	16.00	---	19.00	---	16.50	---
Southwest	7.05	6.17	7.85	6.07	8.05	6.82	6.67	5.83	6.84	2.50
Oklahoma	6.60	2.36	5.75	2.50	7.50	2.25	---	6.00	8.00	---
Texas	7.10	6.39	8.05	6.30	8.09	7.20	6.67	5.82	6.41	2.50
Western	6.64	6.44	8.00	6.30	7.39	7.22	6.24	6.12	5.00	2.50
Coastal plain	6.50	---	---	---	---	---	---	---	6.50	---
Hill section	7.00	---	---	---	---	---	---	---	7.00	---
Irrigation	8.87	5.41	9.25	---	10.31	7.00	8.25	4.50	---	---
West	15.23	7.14	10.13	6.63	---	9.12	13.04	5.00	18.46	---
Arizona	13.50	7.32	---	6.48	---	9.59	---	5.00	13.50	---
California	15.24	7.76	10.13	8.35	---	2.50	13.04	---	18.53	---
New Mexico	---	5.20	---	5.20	---	---	---	---	---	---
United States	12.84	7.37	8.67	6.95	11.08	8.14	10.36	6.21	17.45	9.23

<sup>1/</sup> Farm management districts. See appendix table 5 for list of major cotton-producing counties included in each district.

<sup>2/</sup> No data for Florida as all gins reported disposing of notes.

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Appendix table 5--Major cotton-producing counties in specified soil management districts, by State, 1976/1977

State	District	Counties
Alabama	Coastal plain	Dallas, Hale, Lowndes, Macon
	Hill section	Autaga, Cherokee, Colbert, Cullman, De Kalb, Elmore, Lauderdale, Lawrence, Limestone, Madison, Morgan, Pickens, Shelby, Tuscaloosa
Arkansas	Hill section	Ashley, Clay, Craighead, Cross, Drew, Greene, Jackson, Lafayette, Lawrence, Lee, Lonoke, Poinsett, Pulaski, St. Francis, Woodruff
	Delta	Chicot, Crittenden, Desha, Jefferson, Lincoln, Mississippi, Monroe, Phillips
Georgia	Coastal plain	Bleckley, Burke, Colquitt, Crisp, Dooly, Jefferson, Laurens, Macon, Pulaski, Terrell
	Piedmont	Morgan, Oconee
Louisiana	Delta	Avoyelles, Bossier, Caddo, Catahoula, Concordia, East Carroll, Franklin, Madison, Morehouse, Natchitoches, Ouachita, Rapides, Richland, St. Landry, Tensas, West Carroll
Mississippi	Coastal plain	Attala, Carroll, Hinds, Holmes, Madison, Montgomery, Noxubee, Winston, Yazoo
	Delta	Bolivar, Coahoma, Humphreys, Issaquena, Leflore, Quitman, Sharkey, Sunflower, Tallahatchie, Tunica, Washington
	Hill section	Alcorn, Calhoun, Chickasaw, De Soto, Grenada, Lee, Marshall, Monroe, Panola, Pontotoc, Prentiss, Tate, Tippah, Tishomingo, Union, Yalobusha
Missouri	Hill section	Stoddard
	Delta	Dunklin, Mississippi, New Madrid, Pemiscot, Scott
New Mexico	Western	Lea, Roosevelt
	Irrigation	Chaves, Dona Ana, Eddy, Luna
North Carolina	Coastal plain	Halifax, Northampton, Robeson, Scotland
	Piedmont	Anson, Cleveland
Oklahoma	Western	Beckham, Caddo, Canadian, Grady, Greer, Jackson, Kiowa, Tillman, Washita
South Carolina	Coastal plain	Barnwell, Calhoun, Clarendon, Darlington, Dillon, Florence, Lee, Marlboro, Orangeburg, Sumter
	Piedmont	Aiken, Anderson, Lexington, York
Tennessee	Delta	Dyer, Lauderdale, Shelby, Tipton
	Hill section	Carroll, Chester, Crockett, Fayette, Gibson, Hardeman, Haywood, Lake, Lincoln, McNairy, Madison
Texas	Western	Bailey, Briscoe, Castro, Childress, Cochran, Collingsworth, Cottle, Crosby, Dawson, Dickens, Donley, Fisher, Floyd, Gaines, Garza, Glasscock, Hale, Hall, Hardeman, Haskell, Hockley, Howard, Jones, Knox, Lamb, Lubbock, Lynn, Martin, Mitchell, Motley, Nolan, Parmer, Runnels, Scurry, Swisher, Terry, Tom Green, Wheeler, Wilbarger, Willacy, Yoakum, Zavala
	Gulf Coast-Prarie	Bell, Brazoria, Delta, Ellis, Falls, Fannin, Fort Bend, Hill, Hunt, Johnson, Kaufman, McLennan, Milam, Navarro, Nueces, San Patricio, Travis, Wharton, Williamson
	Hill section	Brazos, Burleson, Robertson
	Irrigation	Cameron, El Paso, Hidalgo, Hudspeth, Reeves

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